What is claimed is:

1. An active sonar system having means for providing a broad-band transmission in the direction of an underwater target, which broad bandwidth is sufficient to contain a plurality of sub-bands, and means for processing returns from said target in each sub-band, which means automatically select those specific sub-band(s) for further processing and target detection which have simultaneously the best joint combination of target and propagation response.

2. The system of claim 1 wherein said processing means is provided by a multi-band matched-filter processor.

3. The system of claim 1 wherever means are provided for processing output signals corresponding to the selected sub-band(s) for indicating target range, azimuth and/or velocity.

4. The system of claim 3 wherever said sub-bands are about 50 Hz in width and said transmission covers a band of at least from 50-600 Hz.

5. The method of underwater target detection comprising the steps of receiving a broadband return for a target processing said return to detection responses from a plurality of sub-bands, selecting and processing for target range, direction and/or velocity at least one of said responses which is the strongest.